

**Amendment to the Claims:**

This listing will replace all prior versions, and listings, of the Claims in this application. The text of all claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~[[double brackets]]~~ or ~~strikethrough~~. The status of each claim is indicated with one of (Original), (Currently Amended), (Cancelled), (Withdrawn), (Withdrawn – Currently Amended), (New), (Previously Presented), or (Not Entered).

**Listing of Claims:**

Claims 1-3 (Cancelled)

4. (Previously Presented) A composition comprising:
  - at least one probiotic organism;
  - R-lipoic acid;
  - at least one nutritive agent,
  - dihydrolipoic acid; and
  - an effective amount of a probiotic activity halting agent to halt probiotic activity in the composition.
5. (Previously Presented) The composition of claim 4, wherein the at least one probiotic organism is selected from the group consisting of *Lactobacillus* species, *Bifidobacterium* species, *Enterococcus* species, *Streptococcus thermophilus*, and combinations thereof.
6. (Previously Presented) The composition of claim 5, wherein the at least one probiotic organism is a *Lactobacillus* species selected from the group consisting of *L. acidophilus*, *L. paracasei*, *L. fermentum*, *L. rhamnosus*, *L. johnsonii*, *L. plantarum*, *L. reuteri*, *L. salivarius*, *L. brevis*, *L. bulgaricus*, *L. helveticus*, *L. grasseri*, *L. casei*, *L. lactis*, and combinations thereof.

7. (Previously Presented) The composition of claim 5, wherein the at least one probiotic organism is a *Bifidobacterium* species selected from the group consisting of *B. bifidum*, *B. breve*, *B. infantis*, *B. longum*, *B. lactis*, and combinations thereof.

8. (Previously Presented) The composition of claim 5, wherein the at least one probiotic organism is an *Enterococcus* species selected from the group consisting of *E. faecium*, *E. faecalis*, and combinations thereof.

9. (Previously Presented) The composition of claim 5, wherein the at least one probiotic organism is *Streptococcus thermophilus*.

10. (Previously Presented) The composition of claim 4, comprising at least one probiotic organism selected from the group consisting of *Lactobacillus* species and at least one probiotic organism selected from the group consisting of *Bifidobacterium* species.

11. (Previously Presented) The composition of claim 4, wherein the nutritive agent is turmeric rhizome (*curcuma longa*).

12. (Previously Presented) The composition of claim 4, wherein the composition comprises a microbiological culture media including:

about 40 composition weight percent of a paste, the paste including at least one probiotic organism;

about 20 composition weight percent R-lipoic acid; and

about 40 composition weight percent turmeric rhizome powder.

13. (Withdrawn – Previously Presented) A process for preparing a dihydrolipoic acid compound comprising:

dispersing the composition of Claim 12 in water to form a broth  
incubating the broth at a predetermined temperature for a select time period to induce probiotic activity;  
adding ethanol to halt the probiotic activity; and  
harvesting the dihydrolipoic acid from the broth.

14. (Withdrawn) The process of claim 13, wherein the broth is incubated at a temperature of about 35°C to about 40°C.

15. (Withdrawn) The process of claim 13, wherein the broth is incubated for a period of about 72 to about 168 hours.

16. (Withdrawn – Previously Presented) A process for deriving a beneficial compound comprising:

dispersing the composition of Claim 12 in water to form a broth;  
incubating the broth to initiate probiotic activity;  
harvesting a waste byproduct of the probiotic activity; and  
separating the beneficial compound from the waste byproduct.

17. (Withdrawn) The process of claim 16, wherein the beneficial compound is dihydrolipoic acid.

18. (Withdrawn) The process of claim 16, wherein the at least one dihydrolipoic acid-producing probiotic organism is selected from the group consisting of *Lactobacillus* species, *Bifidobacterium* species, *Enterococcus* species, *Streptococcus thermophilus*, and combinations thereof.

19. (Withdrawn) The process of claim 16, wherein the nutritive agent is turmeric rhizome (*curcuma longa*).

20. (Previously Presented) The composition of Claim 4, wherein the composition is used in a medicament or nutritional supplement.

21. (Currently Amended) A composition comprising:  
*Bifobacterium longum*;  
*Lactobacillus acidophilus*;  
*Enterococcus faecium*;  
*Streptococcus thermophilus*;  
R-lipoic acid;  
at least one nutritive agent;  
dihydrolipoic acid; and  
an effective amount of a probiotic activity halting agent to halt probiotic activity in the composition and render the microorganisms non-viable.

22. (Previously Presented) The composition of Claim 21, further comprising *B. breve*, *B. infantis*, *L. bulgaricus*, *L. casei*, *L. fermentum*, *L. helveticus* and *L. plantarum*.

23. (Cancelled)

24. (Currently Amended) A composition comprising:  
at least one once living dihydrolipoic acid-producing probiotic organism selected from the group consisting of *Lactobacillus* species, *Bifidobacterium* species, *Enterococcus* species, *Streptococcus thermophilus*, and combinations thereof;  
R-lipoic acid;  
an aqueous medium;  
turmeric rhizome (*curcuma longa*);  
dihydrolipoic acid; and  
an effective amount of a probiotic activity halting agent to halt probiotic activity in the composition.

25. (Previously Presented) The composition of Claim 4, wherein the naturally-derived dihydrolipoic acid is produced in situ from the R-lipoic acid.

26. (Previously Presented) The composition of Claim 4, wherein the probiotic activity halting agent comprises ethanol.

Claims 27-38 (Cancelled)

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